



COPY

(1 of 2)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet **2** of **3**

Complete if Known

Application Number	10/072,728
Filing Date	February 7, 2002
First Named Inventor	Chester L. Schuler
Art Unit	2675
Examiner Name	Ming-Hun Liu
Attorney Docket Number	IMMR092/02US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		PATRICK, "Design, Construction, and Testing of a Fingertip Tactile Display for Interaction with Virtual and Remote Environments," <i>Master of Science Thesis</i> , MIT, Aug. 1990, archived Nov. 8, 1990.
		CALDER, "Design of A Force-Feedback Touch-Introducing Actuator For Teleoperator Robot Control," <i>Bachelor of Science Thesis</i> , MIT, May 1983, archived June 23, 1983.
		WIKER, "Teletouch Display Development: Phase 1 Report," <i>Technical Report 1230</i> , Naval Ocean Systems Center, San Diego, July 1988.
		BLISS, "Optical-to-Tactile Image Conversion for the Blind," <i>IEEE Transactions on Man-Machine Systems</i> , Vol. MMS-11, No. 1, March 1970.
		JOHNSON, "Shape-Memory Alloy Tactile Feedback Actuator," <i>Armstrong Aerospace Medical Research Laboratory</i> , AAMRL-TR-90-039, August, 1990.
		KONTARINIS et al., "Tactile Display of Vibratory Information in Teleoperation and Virtual Environments," <i>PRESENCE</i> , 4(4):387-402, Harvard Univ., 1995.
		AUKSTAKALNIS et al., "Silicon Mirrors: The Art and Science of Virtual Reality," ISBN 0-938151-82-7, pp. 129-180, 1992.
		EBERHARDT et al., "Inducing Dynamic Haptic Perception by The Hand: System Description and Some Results," <i>DSC-Vol. 55-1, Dynamic Systems and Control Volume 1</i> , ASME 1994.
		GOBEL et al., "Tactile Feedback Applied to Computer Mice," <i>International Journal of Human-Computer Interaction</i> , Vol. 7, No. 1, pp. 1-24, 1995.
		PIMENTEL et al., "Virtual Reality: through the new looking glass," 2 nd Edition; McGraw-Hill, ISBN 0-07-050167-X, pp. 41-202, 1994.
		"Cyberman Technical Specification," <i>Logitech Cyberman SWIFT Supplement to Logitech Mouse Technical Reference and Programming Guide</i> , 4/5/1994.
		OHYOUNG et al., "The Development of A Low-Cost Force Feedback Joystick and Its Use in the Virtual Reality Environment," <i>Proceedings of the Third Pacific Conference on Computer Graphics and Applications, Pacific Graphics '95</i> , Seoul, Korea, 21-24 August 1995.
		KACZMAREK et al., "Tactile Displays," <i>Virtual Environment Technologies</i> , Chap. 9, pp. 349-414.
		LAKE, "Cyberman from Logitech," at http://www.ibiblio.org/GameBytes/issue21/greviews/cyberman.html , 1994.
		YAMAKITA et al., "Tele-Virtual Reality of Dynamic Mechanical Model," <i>Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots and Systems</i> , Raleigh, NC, July 7-10, 1992

Examiner Signature /Sriakshmi Kumar/

Date Considered 03/28/2008

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

None of the references are considered. /SKK/



COPY

(1 of 2)

PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 3 of 3

Complete if Known

Application Number	10/072,728
Filing Date	February 7, 2002
First Named Inventor	Chester L. Schuler
Art Unit	2675
Examiner Name	Ming-Hun Liu
Attorney Docket Number	IMMR092/02US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		MOL: "Man-Machine Tactile," S/D Journal, July/August 1972 Issue.
		ROSENBERG, "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance in Telepresence Tasks," Ph.D. Dissertation, Stanford University, June 1994.

None of the references are considered. /SKK/

Examiner Signature	/Srilakshmi Kumar/	Date Considered	03/28/2008
--------------------	--------------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



(2 of 2)

COPY

Approved for use through 10/31/2002. OMB 0651-0031
 U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
 Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet **5** of **11**

Complete if Known

Application Number	10/072,728
Filing Date	February 7, 2002
First Named Inventor	Chester L. Schuler
Art Unit	2675
Examiner Name	Ming Hun Liu
Attorney Docket Number	IMMR092/02US

Examiner Initials ¹	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ²	Number ²	Kind Code ² (if known)			
		DE	4 400 790	A1	05-18-1995		
		EP	0 349 086		03-01-1990		
		EP	0 111 992		09-1983		
		EP	0085518	A1	08-10-1983		
		EP	0607380	A1	07-27-1994		
		EP	0265011		04-27-1988		
		EP	0626634	A2	11-30-1994		
		GB	0 326 439		02-08-1991		
		GB	2 235 310	A	06-1990		
		JP	H4-8381		01/13/1992	Taito Corporation	
		JP	H2-185278		07/28/1990	Taito Corporation	
		JP	H7-24147		01/27/1995	Taito Corporation	
		JP	H5-192449		08/03/1993	Taito Corporation	
		JP	H5-86387		11-22-1993	Taito Corporation	
		JP	H6-210065		08-02-1994		
		JP	H4-92691		03-25-1992		
		JP	S62-194389		12-10-1987		
		WO	01/11775	A1	02-15-2001	Peter Gold	
		WO	9520787		08-03-1995		
		WO	9532459		11-30-1995		
		WO	9721160		06-12-1997		
		WO	92/00559		01-09-1992		

None of the references are considered. /SKK/

Examiner Signature	/Srilakshmi Kumar/	Date Considered	03/28/2008
--------------------	--------------------	-----------------	------------

¹ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

² Applicant's unique citation designation number (optional). ³ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20503.



COPY

(2 of 2)

PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 6 of 11

Complete If Known

Application Number	10/072,728
Filing Date	February 7, 2002
First Named Inventor	Chester L. Schuler
Art Unit	2675
Examiner Name	Ming Hun Liu
Attorney Docket Number	IMMR092/02US

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		SCANNELL, "Taking a Joystick Ride," Computer Currents, Boston Edition, Vol. 9, No. 11, November 1994.
		"Component Maintenance Manual With Illustrated Parts List, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 28 January 2002 (3 pages).
		"Technical Manual Overhaul Instructions With Parts Breakdown, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 15 July 1980 (23 pages).
		IBM Technical Disclosure Bulletin, Vol. 38, No. 8, 1995, pp. 625-626.
		ZAN et al., "Manual resolution of Compliance When Work and Force Cues are Minimized," DSC-Vol. 49, Advances in Robotics, Mechatronics and Haptic Interfaces ASME 1993, The America Society of Mechanical Engineers, pp. 99-104, (11/28-12/03/1993).
		ADELSTEIN et al., "Human Machine Interfaces for Teleoperators and Virtual Environments, NASA Conference Publication 10071, N95-14042, pp. 108-113, (03/04-09/1990)
		IWATA et al., "Volume Haptization," 0-8186-4910-0-94 IEEE, pp. 16-23, (1993)
		RUSSO, "The Design and Implementation of a Three Degree of Freedom Force Output Joystick," MIT Libraries Archives 08/14/1990, pp. 1-131, (May 1990)
		BURDEA et al., "Dextrous telerobotics with force feedback - an overview. Part 2: Human factors," Robotics (1991) Volume 9, pp. 291-298, (06/22/1990)
		SNOW et al., "Compact Force-Reflecting Hand Controller," NASA TechBriefs, April 1991, Volume 5, Number 4, p. 88, (April 1991)
		BEJCZY et al., "Controlling Remote Manipulators Through Kinesthetic Coupling," Computers in Mechanical Engineering NT Control No. MPO-17851; JPL Case No. 5348 Attachment, pp. 48-61, (July 1983)
		TOWNSEND "Model-X Force-reflecting Hand Controller," NT Control No. MPO-17851; JPL Case No. 5348 Attachment, pp. 1-17, (08/20/1987)
		KOTOKU, "A Predictive Display with Force Feedback and its Application to Remote Manipulation System with Transmission Time Delay," 0-7803-0737-2/92 1992 © IEEE, pp. 239-246, (07/07-07/1992)

None of the references are considered. /SKK/

Examiner Signature	/Srilakshmi Kumar/	Date Considered	03/28/2008
--------------------	--------------------	-----------------	------------

¹ EXAMINER: In reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

² Applicant's unique citation designation number (optional). ³ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



(2 of 2)

COPY

PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 7 of 11**Complete If Known**Application Number 10/072,728Filing Date February 7, 2002First Named Inventor Chester L. SchulerArt Unit 2675Examiner Name Ming Hun LiuAttorney Docket Number IMMR092/02US

None of the references are considered. /SKK/

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		WRIGHT, "A Manufacturing Hand," ISSN 0736-5845/85 (704), pp. 13-23, (1985)
		Batter, et al., "Gropo-I: A Computer Display to the Sense of Feel", University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA
		Minsky, et al., "Falling and Seeing: Issues in Force Display", Department of Computer Science, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599, 1990 ACM.
		Russo, "The Design and Implementation of a Three Degree-of-Freedom Force Output Joystick", Submitted to the Department of Mechanical Engineering on May 11, 1990.
		Rosenberg, Louis B., "The Use of Virtual Fixtures to Enhance Operator Performance in Time Delayed Teleoperation, Armstrong Laboratory, March 1993, pp. 1-45.
		Rosenberg, Louis B., "Perceptual Design of a Virtual Rigid Surface Contact," Center for Design Research, Stanford University, Air Force Material Command, April 1993, pp. 1-41.
		Atkinson, William D. et al, "Computing with Feeling," Comput. & Graphics, Vol. 2, No. 2-E, pp. 97-103.
		Wiker, Steven F. et al., "Development of Tactile Mice for Blind Access to Computers: Importance of Stimulation Locus, Object Size, and Vibrotactile Display Resolution." Proceedings of the Human Factors Society 35 th Annual Meeting 1991, pp. 708-712.
		Burdea, Grigore et al., "Dextrous Telerobotics with Force Feedback-An Overview," Robotica 1991, Vol. 9.
		Gotow, J.K., et al., "Perception of Mechanical Properties at the Man-Machine Interface," IEEE 1987, pp. 688-689.
		Adelestein Bernard D. et al., "A High Performance Two Degree-of-Freedom Kinesthetic Interface," Massachusetts Institute of Technology, 1992, pp. 108-112.
		Kotoku, T. et al., "Environment Modeling for the Interactive Display (EMID) used in Telerobotic Systems", IROS, Nov. 1991, pp. 999-1004.

Examiner
Signature

/Srilakshmi Kumar/

Date
Considered

03/28/2008

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR FOUR EEN COMING TO THE CHIEF INFORMATION OFFICER, U.S. PATENT AND TRADEMARK OFFICE, WASHINGTON, DC 20231.



(2 of 2)

COPY

PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 8 of 11

Complete If Known

Application Number	10/072,728
Filing Date	February 7, 2002
First Named Inventor	Chester L. Schuler
Art Unit	2675
Examiner Name	Ming Hun Liu
Attorney Docket Number	IMMR092/02US

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		Hendon, J. N. "The State of the Art Model M-2 Maintenance System", Proceedings of the 1984 National Topical Meeting on Robotics and Remote Handling in Hostile Environments, American Nuclear Society, pp. 59-66.
		Hannaford, B. et al., "Performance Evaluation of a Six-Axis Generalized Force-Reflecting Teleoperator," IEEE Transactions on Systems, Man, and Cybernetics, 1991.
		Snow, E. et al., "Compact Force Reflecting Hand Controller," NASA Tech Brief Vol. 15, No. 4, Item 153, April 1991, pp. 1-3, 1a-15a.
		Fischer, P. et al., "Specification and Design of Input Devices for Teleoperation", IEEE Conference on Robotics and Automation, IEEE, 1990, pp. 540-545.
		Akamatsu, M. et al. "Multimodal Mouse: A Mouse-Type Device with Tactile and Force Display", Presence, Vol. 3, No. 1, Winter 1994, pp. 73-80.
		Colgate, J. et al., "Implementation of Stiff Virtual Walls in Force-Reflecting Interfaces," Sept. 22, 1993
		Buttolo et al., "Pen Based Force Display for Precision Manipulation in Virtual Environments", IEEE March 1995, pp. 217-224.
		Yokokohji, Y. et al., "What You Can See is What You Can Feel - Development of a Visual/Haptic Interface to Virtual Environment," IEEE Jan. 1996, pp. 46-54.
		Rosenberg L. et al., "Perceptual Decomposition of Virtual Haptic Surfaces," Proceedings IEEE Symposium on Research Frontiers in Virtual Reality, Oct. 1993.
		Rosenberg L., "Virtual Fixtures as Tools to Enhance Operator Performance in Telepresence Environments", SPIE Telemanipulator Technology, 1993.
		Rosenberg, L., "Virtual Haptic Overlays Enhance Performance in Telepresence Tasks", SPIE 1994.

None of the references are considered. /SKK/

Examiner Signature	/Srilakshmi Kumar/	Date Considered	03/28/2008
--------------------	--------------------	-----------------	------------

¹ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

² Applicant's unique citation designation number (optional). ³ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETION DATE TO THE CHIEF INFORMATION OFFICER.



(2 of 2)

COPY

PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet **9** of **11**

Complete if Known

Application Number	10/072,728
Filing Date	February 7, 2002
First Named Inventor	Chester L. Schuler
Art Unit	2875
Examiner Name	Ming Hun Liu
Attorney Docket Number	IMMR092/02US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		Howe, R. et al., "Task Performance with a Dextrous Teleoperated Hand System," Proceedings of SPIE, Vol. 1833, Nov. 1992.
		Su, S. Augustine, "The Virtual Panel Architecture: A 3D Gesture Framework," IEEE Jan. 1993.
		Rosenberg, L., "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance in Telepresence Tasks", Dept. of Mechanical Engineering, Stanford Univ., June 1994, pp. 1-214.
		Adachi, Yoshitaka et al., "Sensory Evaluation of Virtual Haptic Push-Buttons," Technical Research Center, Suzuki Motor Corporation, November 1994.
		Munch, S., et al., "Intelligent Control for Haptic Displays," Eurographics Association, Vol. 15, No. 3, 1996, pp. C217-C226.
		Payette, J. et al., "Evaluation of a Force Feedback (Haptic) Computer Pointing Device in Zero Gravity", Proceedings of the ASME Dynamics Systems and Control Division, ASME 10/17/1996, pp. 547-553.
		Hogan, N., "Controlling Impedance at the Man/Machine Interface", Proceedings 1989 IEEE International Conference on Robotics and Automation, 1989, pp. 1626-1631.
		Hasser, C., "Tactile Feedback for a Force-Reflecting Haptic Display," Univ. of Dayton, Dayton OH, 1995, pp. 1-96.
		Tan, H. et al., "Human Factors for the Design of Force-Reflecting Haptic Interfaces," ASME WAM 1994, pp. 1-11.
		Iwata, H. et al., "Volume Haptization", IEEE 1993, pp. 16-18.
		Kelley, A.J. et al., "MagicMouse: Tactile and Kinesthetic Feedback in the Human-Computer Interface using an Electromagnetically Actuated Input/Output Device," Dept. of Elec. Engineering, Univ. of British Columbia, 1993, pp. 1-27

None of the references are considered. /SKK/

Examiner Signature	/Srilakshmi Kumar/	Date Considered	03/28/2008
--------------------	--------------------	-----------------	------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the PTO.



(2 of 2)

COPY

PTO/SB08A (10-01)

Approved for use through 10/31/2002. OMB 0051-0031

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet **10** of **11****Complete if Known**Application Number **10/072,728**Filing Date **February 7, 2002**First Named Inventor **Chester L. Schuler**Art Unit **2675**Examiner Name **Ming Hun Liu**Attorney Docket Number **IMMR092/02US****OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		Iwata, H., "Artificial Reality with Force-feedback: Development of Desktop Virtual Space with Compact Master Manipulator," Computer Graphics, Vol. 24, No. 4, 1990, pp. 165-170.
		Hannaford, B. et al., "Force-Feedback Cursor Control," NASA Tech Brief, Vol. 13, No. 11, Item #21, pp. 1-4
		Rutherford, M., "Third Generation Digital Flight Controls," CAE Electronics, Ltd., The Royal Aeronautical Society, 1984 Spring Convention Future Applications and Prospects for Flight Simulation, May 9-10, 1984, paper number 15.
		Baradat, Jean and Macroix, Michel, "Advanced Features in Control Loading and Motion Systems for Simulators," National Security Industrial Association 1st Interservice/Industry Training Equipment Conference Proceedings, Nov. 27-29, 1981.
		Norlin, Ken A., "Flight Simulation Software at NASA Dryden Flight Research Center," American Institute of Aeronautics and Astronautics's Flight Simulation Technologies Conference, Baltimore, MD, August 7-10, 1995.
		Corrao, Joseph M., "Control Loading," American Institute of Aeronautics and Astronautics's Flight Simulation Update 1987, Jan. 12-16, 1987
		Corrao, J.M., "Control Loading," American Institute of Aeronautics and Astronautics's Flight Simulation Update 1988, Jan. 11-15, 1988.
		Rinaldi, P., "Digital Control Loading - A Modular Approach," International Air Transport Association 6th Meeting of the Flight Simulator Technical Sub-Committee, Montreal, June 1-4, 1982
		Hildreth, Bruce L., Eyermann, Roger E. and Trunkle, Thomas Dr., "DC Servo-Motors for High Performance High Reliability Control Loading in Flight Simulators," American Defense Preparedness Association 12th Interservice/Industry Training System Conference, Nov. 6-8, 1990
		Baigrie, Stephen A., Reflectone Inc., "Electric Control Loading - A Low Cost, High Performance Alternative," American Defense Preparedness Association 12th Interservice/Industry Training System Conference, Nov. 6-8, 1990.

None of the references are considered. /SKK/

Examiner Signature	/SriLakshmi Kumar/	Date Considered	03/28/2008
--------------------	--------------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

* Applicant's unique citation designation number (optional). * Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



(2 of 2)

COPY

PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 11

of 11

Complete If Known

Application Number 10/072,728

Filing Date February 7, 2002

First Named Inventor Chester L. Schuler

Art Unit 2675

Examiner Name Ming Hun Liu

Attorney Docket Number IMM092/02US

None of the references are considered. /SKK/

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		Giel et al., "Digital Control Loading", Summary, Paper 1, Paper 2; Paper 3, International Air Transport Association, Seventh Flight Simulator Technical Sub-Committee Meeting, Item number 10, Montreal, Sept. 17-20, 1984.
		Seidensticker, Steve, "Application of Microcomputers to the Simulator 'Linkage' Problem," National Security Industrial Association 4th Interservice/Industry Training Equipment Conference Proceedings, Nov. 16-18, 1982.
		Rolle, J.M. and Staples, K. J., Flight Simulation, eds., 1986.
		Albers, F. Gerry, "Microcomputer Base for Control Loading," Naval Training Equipment Center 11th NTEC Industry Conference Proceedings, NAVTRAEQUIPCEN IH-306, Nov. 14-16, 1978.
		Schmult, Brian et al., "Application Areas for a Force-Feedback Joystick," ASME 1993, DSCVol. 49, pp. 47-54.
		Ellis, R.E. et al., "Design and Evaluation of a High-Performance Prototype Planar Haptic Interface," ASME December 3, 1993, DSCVol. 49, pp. 55-64.
		Millman, P. et al., "Design of a Four Degree-of-Freedom Force-Reflecting Manipulandum with a Specified Force/Torque Workspace," IEEE CH2969-4, 1991, pp. 1488-1492.
		Kilpatrick, P., "The Use of a Kinesthetic Supplement in an Interactive Graphics System," Univ. of N. Carolina, 1976, pp. 1-175.
		Hirota, Koichi et al., "Development of Surface Display," IEEE 0-7803-1363-7, 1993, pp. 256-262.
		Brooks, F. et al., "Project GROPE- Haptic Displays for Scientific Visualization," Computer Graphics, Vol. 24, No. 4, 1990, pp. 177-185.
		Winey III, C., "Computer Simulated Visual and Tactile Feedback as an Aid to Manipulator and Vehicle Control," Mass. Institute of Tech., Mech. Engineering, 1981, pp. 1-79.
		Hasser, C. et al., "Tactile Feedback with Adaptive Controller for a Force-Reflecting Haptic Display," Parts 1&2, IEEE 0-7803-3131-1, 1996, pp. 526-533.

Examiner
Signature

/Srilakshmi Kumar/

Date
Considered

03/28/2008

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

* Applicant's unique citation designation number (optional). * Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.